

YO9-99-302
Amendment dated 11/06/2003

09/409,277

00280556AA
Reply to office action mailed 09/03/2003

Amendments to the Specification:

Please replace the paragraph beginning at page 6, line 10, with the following rewritten paragraph:

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Referring again to Figure 1, the data processing system 1 of the present invention comprises a data processor 2 having a memory 3. The memory 3 is coupled to the data processor 2 via a bidirectional bus. In preferred embodiments, the memory 3 includes program and data memory. The memory also includes information about the programming objects 4, information about graphical element information 5, including graphical information representing the programming objects 4. The memory includes generated program information 6 about the program generated by the programming objects.

Please replace the paragraph beginning at page 6, line 18, with the following rewritten paragraph:

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The graphical element information 5 (e.g., programming objects represented as graphical elements) is displayed on the display 7, which is coupled to the data processor 2. In the preferred embodiments of the invention, a user data entry device 8, (e.g., keyboard or other interactive device) and a pointing device 9, for example, a mouse or a trackball, are also coupled to the data processor 2.

Please replace the paragraph beginning at page 6, line 23, with the following rewritten paragraph:

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In a preferred embodiment, the display 7 provides a presentation space in order to display the programming object of the present invention. In further embodiments, either the pointing device 9 or predefined keys of the user data device 8 may be used to manipulate the data in conformity with the present invention.

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Please replace the paragraph beginning at page 6, line 28, with the following rewritten paragraph:

It is also contemplated, for preferred embodiments, that a persistent storage mechanism 10 may exist and be utilized to store the generated program information 6. This type of storage media may include, but not be limited to, standard disk drive technology, tape, or flash memory. In a preferred embodiment, the program information may be both stored onto the persistent media, and/or retrieved by similar data processing system 1 for execution. It is also anticipated that sufficient information about programming objects and their graphical elements may be stored and/or retrieved in such a fashion as to allow the further modification of the generated program utilizing the stored information about programming objects 5 4 and graphical element information 6 5.

Please replace the paragraph beginning at page 8, line 20, with the following rewritten paragraph:

Manipulation of the graphical elements shown on the display 100 is achieved through, but not limited to the means mentioned in the description of Figure 1. As is typical to the industry, and by way of illustration, a mouse cursor 210 is utilized on the screen ~~of~~ for manipulating graphical elements using the mouse device 230. Any of the general techniques of that interaction can be used, including but not limited to, moving, pushing (as in push buttons), and drag-drop. Alternatively, similar effects can be had utilizing a keyboard 220.

Please replace the paragraph beginning at page 9, line 7, with the following rewritten paragraph:

Referring now to Figure 3, there is shown a block diagram of a visual programming language of the present invention. The teaching of this diagram is to illustrate the product of this invention, namely programming object *state reflection*.

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The Figure 3 shows a display 400 along with memory 410 for programming objects. The display 400 depicts visual representations 440, 450 and 460 of the programming objects 470, 480 and 490 in a manner discussed for Figure 2. A mouse cursor 500 is also shown. The visual programming language executable 430 maintains the relationships between the visual representations and the programming objects, again, as discussed for Figure 2.

Please replace the paragraph beginning at page 10, line 25, with the following rewritten paragraph:

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Each visual representation 630 has flexibility in altering graphical properties of its graphical element 640 in arbitrary manners. Any particular well-defined means of alteration is called graphical aspect 650, and each visual representation has a set of them. Any number of implementations may be employed to implement a graphical aspect, including but not restricted to rules-based processing, descriptive-data, or even hand-written programs. The implementation means is designated as an aspect process 690 to which the graphic aspect has access.
